Patent Claims

1. Pyridinylanilides of the formula (I)

5.... in which

R represents hydrogen, fluorine, chlorine, methyl or trifluoromethyl;

R¹, R² and R³ independently of one another each represents hydrogen, halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl; or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents in each case the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkylamino, di(C₁-C₄-alkylamino)

10

15

20

25

alkyl)amino or phenyl; or represents C_2 - C_4 -alkenyloxy or C_2 - C_4 -alkynyloxy, represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy;

or

 R^4

R² and R³, if attached to the pyridinyl moiety in ortho position to each other, furthermore together represent C₃-C₄-alkylene, C₃-C₄-alkenylene, C₂-C₃-oxyalkylene or C₁-C₂-dioxyalkylene, in each case optionally mono- to tetra-substituted, identically or differently, by fluorine, chlorine, oxo, methyl, ethyl, trifluoromethyl;

15

5

10

represents hydrogen, C₁-C₈-alkyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-halogenoalkyl, C₁-C₄-halogenoalkylthio, C₁-C₄-halogenoalkylsulfinyl, C₁-C₄-halogenoalkylsulfonyl, halogeno-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine-and/or bromine atoms; formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl; (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-halogenoalkoxy)carbonyl-C₁-C₃-alkyl having in each case 1 to 7 fluorine-, chlorine-and/or bromine atoms, (C₁-C₃-alkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-alkoxy)-carbonyl-C₁-C₃-halogenoalkyl having in each case 1 to 6 fluorine-, chlorine- and/or bromine atoms, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-halogenoalkyl

20

R⁵ represents hydrogen, C₁-C₈-alkyl, C₁-C₈-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-halogenoalkyl, C₁-C₆-halogenoalkoxy, halogeno-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine-and/or bromine atoms; or -COR¹⁰.

25

R⁶ and R⁷ independently of one another each represent hydrogen, C₁-C₈-alkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-halogenoalkyl, halogeno-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halogenocycloalkyl having in each case 1 bis 9 fluorine-, chlorine-and/or bromine atoms,

30

R⁶ and R⁷ furthermore together with the nitrogen atom to which they are attached, represent a saturated 5- to 8-membered heterocycle, which heterocycle may have 1 or 2 additional, non-adjacent heteroatoms selected from the group consisting of oxygen, sulphur and NR¹¹, and which heterocycle may optionally be mono- to poly-substitu-

5

10

15

ted, identically or differently, by halogen or C₁-C₄-alkyl,

R⁸ and R⁹ independently of one another each represent hydrogen, C₁-C₈-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-halogenoalkyl, C₃-C₈-halogenocycloalkyl having in each case 1 bis 9 fluorine-, chlorine- and/or bromine atoms,

R⁸ and R⁹ furthermore together with the nitrogen atom to which they are attached, represent a saturated 5- to 8-membered heterocycle, which heterocycle may have 1 or 2 additional, non-adjacent heteroatoms selected from the group consisting of oxygen, sulphur and NR¹¹, and which heterocycle may optionally be mono- to poly-substituted, identically or differently, by halogen or C₁-C₄-alkyl,

R¹⁰ represents hydrogen, C₁-C₈-alkyl, C₁-C₈-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-halogenoalkyl, C₁-C₆-halogenoalkoxy, halogeno-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine-and/or bromine atoms,

 R^{14} represents hydrogen or C_1 - C_6 -alkyl,

A represents a radical of the formula (A1)

$$R^{12}$$
 N
 R^{13}
 R^{14}
(A1), wherein

R¹² represents hydrogen, cyano, halogen, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₃-C₆-cycloalkyl, C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkoxy or C₁-C₄-halogenoalkylthio each having 1 to 5 halogen atoms, aminocarbonyl or aminocarbonyl-C₁-C₄-alkyl and

 R^{13} represents hydrogen, halogen, cyano, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -alkylthio and

R¹⁴ represents hydrogen, C₁-C₄-alkyl, hydroxy-C₁-C₄-alkyl, C₂-C₆-alkenyl, C₃-C₆-cycloalkyl, C₁-C₄-alkylthio-C₁-C₄-alkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-halogenoalkylthio-C₁-C₄-alkyl, C₁-C₄-halogenoalkoxy-C₁-C₄-alkyl each having 1 to 5 halogen atoms, or phenyl,

A represents a radical of the formula (A2)

 R^{15} and R^{16} independently of one another each represent hydrogen, halogen, $C_1\text{-}C_4\text{-}$

20

25

or

alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and

R¹⁷ represents halogen, cyano or C₁-C₄-alkyl, or C₁-C₄-halogenoalkyl or C₁-C₄-halogenoalkoxy each having 1 to 5 halogen atoms,

or

5

10

15

20

25

A represents a radical of the formula (A3)

R¹⁸ and R¹⁹ independently of one another each represent hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and

R²⁰ represents hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or .

A represents a radical of the formula (A4)

R²¹ represents hydrogen, halogen, hydroxyl, cyano, C₁-C₆-alkyl, C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkoxy or C₁-C₄-halogenoalkylthio each having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A5)

$$\mathbb{R}^{23}$$
 (A5), wherein

R²² represents halogen, hydroxyl, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkylthio or C₁-C₄-halogenoalkoxy each having 1 to 5 halogen atoms and

R²³ represents hydrogen, halogen, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkyl-thio, C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkoxy each having 1 to 5 halogen atoms, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl,

or

A represents a radical of the formula (A6)

$$R^{25}$$
 (A6), wherein

R²⁴ represents C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and

 R^{25} represents C_1 - C_4 -alkyl,

Q³ represents a sulphur or oxygen atom, represents SO, SO₂ or CH₂,

p represents 0, 1 or 2, where R²⁵ represents identical or different radicals if p represents 2,

·or

A represents a radical of the formula (A7)

R²⁶ represents C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

10 or

5

15

20

A represents a radical of the formula (A8)

R²⁷ represents C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A9)

 R^{28} and R^{29} independently of one another each represent hydrogen, halogen, amino, C_1 - C_4 -alkyl or C_1 - C_4 -halogenoalkyl having 1 to 5 halogen atoms and

R³⁰ represents hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A10)

R³¹ and R³² independently of one another each represent hydrogen, halogen, amino, nitro, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and represents hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

A represents a radical of the formula (A11)

(A11), wherein

R³⁴ represents hydrogen, halogen, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)-amino, cyano, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and

R³⁵ represents halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A12)

(A12), wherein

10

15

20

25

5

R³⁶ represents hydrogen, halogen, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)-amino, cyano, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms and

R³⁷ represents halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

Α

represents a radical of the formula (A13)



(A13), wherein

R³⁸ represents halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A14)

(A14), wherein

R³⁹ represents hydrogen or C₁-C₄-alkyl and

R⁴⁰ represents halogen or C₁-C₄-alkyl,

or

A represents a radical of the formula (A15)

R⁴¹ represents C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A16)

(A16), wherein

R⁴² represents hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl having 1 to 5 halogen atoms,

or

A represents a radical of the formula (A17)

(A17), wherein

10

R⁴³ represents halogen, hydroxyl, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkylthio or C₁-C₄-halogenoalkoxy each having 1 to 5 halogen atoms,

15 excluded compounds of the formula (I), in which

R represents hydrogen and

R¹, R² and R³ independently of one another each represents hydrogen, halogen; or straightchain or branched alkyl having 1 to 4 carbon atoms; or straight-chain or branched halogenoalkyl having 1 to 4 carbon atoms; and

20 R⁴

25

R⁴ represents hydrogen

and

A represents a radical of the formula (A1)

(A1), wherein

R¹² represents halogen, C₁-C₄-alkyl, C₁-C₄-halogenoalkyl and

R¹³ represents hydrogen and

R¹⁴ represents methyl,

or

A represents a radical of the formula (A2)

 R^{15} and R^{16} independently of one another each represent hydrogen or C_1 - C_4 -alkyl and R^{17} represents halogen, C_1 - C_4 -alkyl or C_1 - C_4 -halogenoalkyl,

5 or

10

A represents a radical of the formula (A4)

R²¹ represents halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl,

or

A represents a radical of the formula (A5)

R²² represents halogen and

R²³ represents hydrogen,

or

15 A represents a radical of the formula (A6)

$$R^{25}$$
 (A6), wherein

R²⁴ represents methyl and

Q³ represents a sulphur or CH₂,

p represents 0,

20 or

A represents a radical of the formula (A9)

 R^{28} and R^{29} independently of one another each represent hydrogen or C_1 - C_4 -alkyl and R^{30} represents methyl,

25 or

A represents a radical of the formula (A11)

(A11), wherein

 R^{34}

represents hydrogen or C1-C4-alkyl and

 R^{35}

represents halogen, C₁-C₄-alkyl or C₁-C₄-halogenoalkyl,

or

A

5

15

20

25

represents a radical of the formula (A16)

(A16), wherein

R⁴² represents halogen.

- 2. Pyridinylanilides of the formula (I) according to Claim 1, in which
- 10 R represents hydrogen, fluorine, chlorine, methyl or trifluoromethyl;
 - R^1 , R^2 and R^3 independently of one another each represents hydrogen, halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 4 carbon atoms and 1 to 9 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylaminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 4 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-halogenoalkyl or C₁-C₄-halogenoalkoxy each having 1 to 9 identical or different halogen atoms,

30 o

R² and R³, if attached to the pyridinyl moiety in ortho position to each other, furthermore together represent -(CH₂)₃-, -(CH₂)₄-, -CH=CH-CH=CH-, -O(CH₂)₂-, -O(CH₂)₃-,

-OCH₂O-, -O(CH₂)₂O-, in each case optionally mono- to tetra-substituted, identically or differently, by fluorine, chlorine, oxo, methyl, ethyl, trifluoromethyl,

R4 represents hydrogen; C₁-C₆-alkyl, C₁-C₄-alkylsulfinyl, C₁-C₄-alkylsulfonyl, C₁-C₃-5 alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkylthio. C₁-C₄-halogenoalkylsulfinyl, C₁-C₄-halogenoalkylsulfonyl, halogeno-C₁-C₃-alkoxy-C1-C3-alkyl, C3-C6-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorineand/or bromine atoms; formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl; (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-10 halogenoalkoxy)carbonyl-C1-C3-alkyl having in each case 1 to 7 fluorine-, chlorineand/or bromine atoms, (C₁-C₃-alkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-alkoxy)carbonyl-C1-C3-halogenoalkyl having in each case 1 to 6 fluorine-, chlorine- and/or bromine atoms, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-halogenoalkoxy)carbonyl-C1-C3-halogenoalkyl having in each case 1 to 13 fluorine-, chlorine- and/or bromine atoms; -COR5, -CONR6R7 or -CH2NR8R9. 15 R^5

R⁵ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkoxy, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkoxy, halogeno-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine-and/or bromine atoms; or -COR¹⁰,

R⁶ and R⁷ independently of one another each represent hydrogen, C₁-C₆-alkyl, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-halogenoalkyl, halogeno-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine- and/or bromine atoms,

R⁶ and R⁷ furthermore together with the nitrogen atom to which they are attached, represent a saturated 5- to 8-membered heterocycle, which heterocycle may have 1 or 2 additional, non-adjacent heteroatoms selected from the group consisting of oxygen, sulphur and NR¹¹, and which heterocycle may optionally be mono- to tetra-substituted, identically or differently, by halogen or C₁-C₄-alkyl,

R⁸ and R⁹ independently of one another each represent hydrogen, C₁-C₆-alkyl, C₃-C₆-cycloal-kyl; C₁-C₄-halogenoalkyl, C₃-C₆-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine- and/or bromine atoms,

R⁸ and R⁹ furthermore together with the nitrogen atom to which they are attached, represent a saturated 5- to 8-membered heterocycle, which heterocycle may have 1 or 2 additional, non-adjacent heteroatoms selected from the group consisting of oxygen, sulphur and NR¹¹, and which heterocycle may optionally be mono- to tetra-substituted, identically or differently, by halogen or C₁-C₄-alkyl,

20

25

ţ.,

30

5

10

15

25

R¹⁰ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkoxy, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-halogenoalkyl, C₁-C₄-halogenoalkoxy, halogeno-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine-and/or bromine atoms,

R¹¹ represents hydrogen or C₁-C₄-alkyl,

A represents a radical of the formula (A1)

$$R^{12}$$
 R^{13}
 R^{13}
(A1), wherein

R¹² represents hydrogen, cyano, fluorine, chlorine, bromine, iodine, methyl, ethyl, iso-propyl, methoxy, ethoxy, methylthio, ethylthio, cyclopropyl, C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy each having 1 to 5 fluorine, chlorine and/or bromine atoms, trifluoromethylthio, difluoromethylthio, aminocarbonyl, aminocarbonylmethyl or aminocarbonylethyl and

R¹³ represents hydrogen, fluorine, chlorine, bromine, iodine, methyl, ethyl, methoxy, ethoxy, methylthio or ethylthio and

R¹⁴ represents hydrogen, methyl, ethyl, n-propyl, iso-propyl, C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms, hydroxymethyl, hydroxyethyl, cyclopropyl, cyclopentyl, cyclohexyl or phenyl,

A represents a radical of the formula (A2)

or

or

R¹⁵ and R¹⁶ independently of one another each represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R¹⁷ represents fluorine, chlorine, bromine, cyano, methyl, ethyl, C₁-C₂-halogenoalkyl or C₁-C₂-halogenoalkoxy each having 1 to 5 fluorine, chlorine and/or bromine atoms,

A represents a radical of the formula (A3)

or

or

5

15

20

R¹⁸ and R¹⁹ independently of one another each represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R²⁰ represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

A represents a radical of the formula (A4)

10 R²¹ represents hydrogen, fluorine, chlorine, bromine, iodine, hydroxyl, cyano, C₁-C₄-alkyl, C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkyl, C₁-C₂-halogenoalkoxy or C₁-C₂-halogenoalkoxy or

A represents a radical of the formula (A5)

R²² represents fluorine, chlorine, bromine, iodine, hydroxyl, cyano, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, difluoromethylthio, trifluoromethylthio, C₁-C₂-halogenoalkyl or C₁-C₂-halogenoalkoxy each having 1 to 5 fluorine, chlorine and/or bromine atoms and

R²³ represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, C₁-C₂-halogenoalkyl or C₁-C₂-halogenoalkoxy each having 1 to 5 fluorine, chlorine and/or bromine atoms, C₁-C₂-alkylsulphinyl or C₁-C₂-alkylsulphonyl,

25 A represents a radical of the formula (A6)

$$R^{25}$$
 (A6), wherein

R²⁴ represents methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R²⁵ represents methyl or ethyl,

Q³ represents a sulphur atom, SO₂ or CH₂,

p represents 0 or 1,

or

5

10

15

25

A represents a radical of the formula (A9)

R²⁸ and R²⁹ independently of one another each represent hydrogen, fluorine, chlorine, bromine, amino, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R³⁰ represents hydrogen, fluorine, chlorine, bromine, iodine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or

A represents a radical of the formula (A10)

R³¹ and R³² independently of one another each <u>preferably</u> represent hydrogen, fluorine, chlorine, bromine, amino, nitro, methyl, ethyl or C₁-C₂-halogeno-alkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R³³ represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

20 or

A represents a radical of the formula (A11)

R³⁴ represents hydrogen, fluorine, chlorine, bromine, amino, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino, cyano, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R³⁵ represents fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or

A represents a radical of the formula (A12)

5

R³⁶ represents hydrogen, fluorine, chlorine, bromine, amino, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino, cyano, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms and

R³⁷ represents fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

A represents a radical of the formula (A17)

10 R⁴³ preferably represents fluorine, chlorine, bromine, iodine, hydroxyl, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, difluoromethylthio, trifluoromethylthio, C₁-C₂-halogenoalkyl or C₁-C₂-halogenoalkoxy each having 1 to 5 fluorine, chlorine and/or bromine atoms,

15 excluded compounds of the formula (I), in which

R represents hydrogen and

R¹, R² and R³ independently of one another each represents hydrogen, halogen; or straightchain or branched alkyl having 1 to 4 carbon atoms; or straight-chain or branched halogenoalkyl having 1 to 4 carbon atoms; and

20 R⁴ represents hydrogen and

A represents a radical of the formula (A1)

R¹² represents fluorine, chlorine, bromine, iodine, methyl, ethyl, iso-propyl, C₁-C₂-halogenoalkyl and

R¹³ represents hydrogen and

R¹⁴ represents methyl,

or

25

A represents a radical of the formula (A2)

(A2), wherein

 R^{15} and R^{16} independently of one another each represent hydrogen, methyl or ethyl and

R¹⁷ represents fluorine, chlorine, bromine, methyl, ethyl, or C₁-C₂-halogenoalkyl,

5 or

A represents a radical of the formula (A4)

R²¹ represents fluorine, chlorine, bromine, iodine, C₁-C₄-alkyl or C₁-C₂-halogenoalkyl,

10 or.

A represents a radical of the formula (A5)

$$\mathbb{R}^{23}$$
 (A5), wherein

R²² represents fluorine, chlorine, bromine, iodine and

R²³ represents hydrogen,

15 or

20

25

A represents a radical of the formula (A6)

$$R^{25}$$
 Q^3 Q^3 Q^{24}

(A6), wherein

R²⁴ represents methyl and

Q³ represents a sulphur or CH₂,

p represents 0,

or

A represents a radical of the formula (A9)

 R^{28} and R^{29} independently of one another each represent hydrogen, methyl or ethyl and

R³⁰ represents methyl,

or

A represents a radical of the formula (A11)

R³⁴ represents hydrogen, methyl or ethyl and

5 R³⁵ represents fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-halogenoalkyl.

3. Pyridinylanilides of the formula (I) according to Claim 1, in which

R represents hydrogen, fluorine, chlorine, methyl or trifluoromethyl;

R¹, R² and R³ independently of one another each represents hydrogen, fluorine, chlorine, bromine, cyano; methyl, ethyl, n- or iso-propyl, n-, iso-, sec- or tert-butyl, methoxy, ethoxy, n- or iso-propoxy, n-, iso-, sec- or tert-butoxy, methylthio, ethylthio, n- or iso-propylthio, n-, iso-, sec- or tert-butylthio, trifluoromethyl, trifluoroethyl, difluoromethoxy, trifluoromethoxy, difluorochloromethoxy, trifluoroethoxy, cyclopropyl, cyclopentyl, cyclohexyl,

or represents the grouping -C(Q1)=N-Q2, wherein

Q¹ represents hydrogen, methyl, ethyl, trifluoromethyl or cyclopropyl, and

Q² represents hydroxyl, methoxy, ethoxy, n-propoxy or iso-propoxy,

or

10

15

20

25

30

R² and R³, if attached to the pyridinyl moiety in ortho position to each other, furthermore together represent -(CH₂)₃-, -(CH₂)₄-, -CH=CH-CH=CH-, -OCH₂O-, -O(CH₂)₂O-, -OCF₂O-, -O(CF₂)₂O-,

R4 represents hydrogen, methyl, ethyl, n- or iso-propyl, n-, iso-, sec- or tert-butyl, pentyl or hexyl, methylsulfinyl, ethylsulfinyl, n- or iso-propylsulfinyl, n-, iso-, sec- or tertbutylsulfinyl, methylsulfonyl, ethylsulfonyl, n- or iso-propylsulfonyl, n-, iso-, sec- or tert-butylsulfonyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl, trifluoromethyl, trichloromethyl, trifluoroethyl, difluoromethylthio, difluorochloromethylthio, trifluoromethylsulfinyl, trifluoromethylsulfonyl, trifluoromethoxymethyl; -CH₂-CHO. -CH₂CH₂-CHO, -CH₂-CO-CH₃, -CH₂-CO-CH₂CH₃, -CH₂-CO-CH(CH₃)₂, -CH₂CH₂-CO-CH₃, -CH₂CH₂-CO-CH₂CH₃, -CH₂CH₂-CO-CH(CH₃)₂, $-CH_2-C(O)OCH_3$, -CH₂-C(O)OCH₂CH₃, $-CH_2-C(O)OCH(CH_3)_2$ -CH₂CH₂-C(O)OCH₃, -CH₂CH₂-C(O)OCH₂CH₃, -CH₂CH₂-C(O)OCH(CH₃)₂, -CH₂-CO-CF₃, -CH₂-CO-CCl₃, -CH₂-CO-CH₂CF₃, -CH₂-CO-CH₂CCl₃,

ţ

-CH₂CH₂-CO-CH₂CF₃, -CH₂CCl₂-CO-CH₂CCl₃, -CH₂-C(O)OCH₂CF₃, -CH₂-C(O)OCF₂CF₃, -CH₂-C(O)OCH₂CCl₃, -CH₂-C(O)OCCl₂CCl₃, -CH₂CH₂-C(O)OCH₂CF₃, -CH₂CH₂-C(O)OCF₂CF₃, -CH₂CH₂-C(O)OCH₂CCl₃, -CH₂CH₂-C(O)O-CCl₂CCl₃; -CONR⁶R⁷ or -CH₂NR⁸R⁹,

R⁵ represents hydrogen, methyl, ethyl, n- or iso-propyl, tert-butyl, methoxy, ethoxy, tert-butoxy, cyclopropyl; trifluoromethyl, trifluoromethoxy; or -COR¹⁰,

R⁶ and R⁷ independently of one another each represent hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl; trifluoromethyl, trifluoromethyl, trifluoromethoxymethyl,

R⁶ and R⁷ furthermore together with the nitrogen atom to which they are attached, represent a saturated heterocycle selected from the group consisting of morpholine, thiomorpholine and piperazine, which heterocycle may optionally be mono- to tetra-substituted, identically or differently, by fluorine, chlorine, bromine or methyl and where the piperazine additionally at the second nitrogen atom may be substituted by R¹¹,

R⁸ and R⁹ independently of one another each represent hydrogen, methyl, ethyl, n- or isopropyl, n-, iso-, sec- or tert-butyl, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, cyclopropyl, cyclopentyl, cyclohexyl; trifluoromethyl, trifluoromethyl, trifluoromethoxymethyl,

R⁸ and R⁹ furthermore together with the nitrogen atom to which they are attached, represent a saturated heterocycle selected from the group consisting of morpholine, thiomorpholine and piperazine, which heterocycle may optionally be mono- to tetra-substituted, identically or differently, by fluorine, chlorine, bromine or methyl and where the piperazine additionally at the second nitrogen atom may be substituted by R¹¹,

R¹⁰ represents hydrogen, methyl, ethyl, n- or iso-propyl, tert-butyl, methoxy, ethoxy, n- or iso-propoxy, tert-butoxy, cyclopropyl; trifluoromethyl, trifluoromethoxy,

R¹¹ represents hydrogen, methyl, ethyl, n- or iso-propyl, n-, iso-, sec- or tert-butyl,

A represents a radical of the formula (A1)

$$\mathbb{R}^{12}$$
 \mathbb{R}^{13}
 \mathbb{R}^{14}
(A1), wherein

R¹² represents hydrogen, fluorine, chlorine, bromine, iodine, methyl, ethyl, isopropyl, monofluoromethyl, monofluoroethyl, difluoromethyl, trifluoromethyl, difluorochloromethyl, trichloromethyl, dichloromethyl, cyclopropyl,

20

5

10

15

25

methoxy, ethoxy, trifluoromethoxy, trichloromethoxy, methylthio, ethylthio, trifluoromethylthio or difluoromethylthio and

R¹³ represents hydrogen, fluorine, chlorine, bromine, iodine or methyl and

R¹⁴ represents hydrogen, methyl, ethyl, iso-propyl, trifluoromethyl, difluoromethyl, hydroxymethyl, hydroxyethyl or phenyl,

or

A represents a radical of the formula (A2)

R¹⁵ and R¹⁶ independently of one another each represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl, difluoromethyl, trifluoromethyl, difluorochloromethyl or trichloromethyl and

R¹⁷ represents fluorine, chlorine, bromine, cyano, methyl, trifluoromethyl, trifluoromethoxy, difluoromethoxy, difluorochloromethoxy or trichloromethoxy,

15 or

A represents a radical of the formula (A4)

R²¹ represents hydrogen, fluorine, chlorine, bromine, iodine, hydroxyl, cyano, methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, difluoromethyl, trifluoromethyl, trifluoromethyl, trifluoromethoxy, difluorochloromethoxy, trichloromethoxy, trifluoromethylthio, difluorochloromethylthio or trichloromethylthio,

or

A represents a radical of the formula (A5)

$$\mathbb{R}^{23}$$
 \mathbb{N} \mathbb{R}^{22} (A5), wherein

R²² represents fluorine, chlorine, bromine, iodine, hydroxyl, cyano, methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, trifluoro-methyl, difluoromethyl, difluoromethyl, trichloromethyl, methoxy, ethoxy, methylthio, ethylthio, difluoromethylthio, trifluoromethylthio, tri-

10

5

20

fluoromethoxy, difluoromethoxy, difluorochloromethoxy or trichloromethoxy and

represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, trifluoromethyl, difluoromethyl, difluoromethyl, trichloromethyl, methoxy, ethoxy, methylthio, ethylthio, trifluoromethoxy, difluoromethoxy, difluorochloromethoxy, trichloromethoxy, methylsulphinyl or methylsulphonyl,

or A R^{23}

represents a radical of the formula (A6)

$$R^{25}$$
 (A6), wherein

10

15

5

R²⁴ represents methyl, ethyl, trifluoromethyl, difluoromethyl, difluoromethyl, difluoromethyl and

R²⁵ represents methyl,

Q³ represents a sulphur atom or CH₂,

p represents 0,

or A

represents a radical of the formula (A9)

20

25

R²⁸ and R²⁹ independently of one another each represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, difluoromethyl, difluorochloromethyl or trichloromethyl and

R³⁰ represents hydrogen, fluorine, chlorine, bromine, iodine, methyl, ethyl, trifluoromethyl, difluoromethyl, difluorochloromethyl or trichloromethyl,

or A

represents a radical of the formula (A11)

R³⁴ represents hydrogen, fluorine, chlorine, bromine, amino, methylamino, dimethylamino, cyano, methyl, ethyl, trifluoromethyl, difluoromethyl, difluoromethyl or trichloromethyl and

R³⁵ represents fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, difluoromethyl, difluorochloromethyl or trichloromethyl,

or

A represents a radical of the formula (A17)

(A17), wherein

5

20

25

R⁴³ preferably represents fluorine, chlorine, bromine, iodine, methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, trifluoromethyl, difluoromethyl, difluoromethyl, trichloromethyl,

10 excluded compounds of the formula (I), in which

R represents hydrogen and

R¹, R² and R³ independently of one another each represents hydrogen, fluorine, chlorine, bromine; methyl, ethyl, n- or iso-propyl, n-, iso-, sec- or tert-butyl; or trifluoromethyl or trifluoroethyl; and

15 R⁴ represents hydrogen and

A represents a radical of the formula (A1)

(A1), wherein

R¹² represents fluorine, chlorine, bromine, iodine, methyl, ethyl, iso-propyl, monofluoromethyl, monofluoroethyl, difluoromethyl, trifluoromethyl, difluoromethyl and

R¹³ represents hydrogen and

R¹⁴ represents methyl,

or

A represents a radical of the formula (A2)

 R^{15} and R^{16} independently of one another each represent hydrogen, methyl or ethyl and

R¹⁷ represents fluorine, chlorine, bromine, methyl, ethyl, or trifluoromethyl,

or

A represents a radical of the formula (A4)

(A4), wherein

R²¹ represents fluorine, chlorine, bromine, iodine, methyl, ethyl, n-propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl, tert-butyl, difluoromethyl, trifluoromethyl, difluorochloromethyl, trichloromethyl,

or

. A represents a radical of the formula (A5)

$$R^{23}$$
 N R^{22}

(A5), wherein

10

5

R²² represents fluorine, chlorine, bromine, iodine and

R²³ represents hydrogen,

or

A represents a radical of the formula (A6)

$$R^{25}$$
 Q^3 Q^3

(A6), wherein

15

R²⁴ represents methyl and

Q³ represents a sulphur or CH₂,

p represents 0,

or

A represents a radical of the formula (A9)

20

 R^{28} and R^{29} independently of one another each represent hydrogen, methyl or ethyl and

R³⁰ represents methyl,

or

25 A represents a radical of the formula (A11)

(A11), wherein

- R³⁴ represents hydrogen, methyl or ethyl and
- R³⁵ represents fluorine, chlorine, bromine, methyl, ethyl, trifluoromethyl, difluoromethyl or trichloromethyl.
- 5 4. Pyridinylanilides of the formula (I) according to Claims 1, 2 or 3, in which R⁴ represents hydrogen.
 - 5. Pyridinylanilides of the formula (I) according to Claims 1, 2 or 3, in which R represents hydrogen.

10

6. Pyridinylanilides of the formula (I-12)

in which

R, R⁴ and A are as defined in Claims 1, 2 or 3 and

15

20

R^{1a} represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

carbamoyl;
or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl,
alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkyl-

sulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

25

5

10

15

25

١,

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

7. Pyridinylanilides of the formula (I-13)

in which

R, R4 and A are as defined in Claims 1, 2 or 3 and

20 R^{1a} represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thio-carbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

8. Pyridinylanilides of the formula (I-14)

25 in which

R, R4 and A are as defined in Claims 1, 2 or 3 and

 R^{1a} and R^{2a} independently of one another each represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

10

5

15

20

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and

Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy.

9. Pyridinylanilides of the formula (I-15)

in which

R, R4 and A are as defined in Claims 1, 2 or 3 and

10

5

15

20

	R ^{1a} and R ^{2a} independently of one another each represents halogen, cyano, nitro, amino,
	hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;
	or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl,
	alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkyl-
5	sulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;
	or represents in each case straight-chain or branched alkenyl or alkenyloxy having in
	each case 2 to 6 carbon atoms;
	or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy,
1997	halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each
10	case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;
	or represents in each case straight-chain or branched halogenoalkenyl or halogeno-
	alkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different
	halogen atoms;
	or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-
15	carbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocar-
	bonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms
	in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to
	6 carbon atoms in the respective hydrocarbon chain;
	or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms;
20	or represents the grouping $-C(Q^1)=N-Q^2$, wherein
	Q ¹ represents hydrogen, hydroxyl or C ₁ -C ₄ -alkyl, C ₁ -C ₄ -halogenoalkyl having 1
* ********	to 9 identical or different halogen atoms, or C ₃ -C ₆ -cycloalkyl and
	Q ² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C ₁ -
0.5	C ₄ -alkyl or C ₁ -C ₄ -alkoxy, each of which is optionally substituted by halogen,
25	cyano, hydroxyl, C ₁ -C ₄ -alkoxy, C ₁ -C ₄ -alkylthio, C ₁ -C ₄ -alkylamino, di(C ₁ -C ₄ -
	alkyl)amino or phenyl; or represents C_2 - C_4 -alkenyloxy or C_2 - C_4 -alkynyloxy, represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl,
•	
	heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which
30	is optionally mono- to tri-substituted, identically or differently, in the ring moiety by
30	halogen, in each case straight-chain or branched C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy.
	halogon, in each case straight-chain of oranoned of o4-ancy and of o4-arcoxy.

in which

R, R⁴ and A are as defined in Claims 1, 2 or 3 and

R^{1a}, R^{2a} and R^{3a} independently of one another each represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl

10

5

15

20

25

having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

- 5 11. Process for preparing pyridinylanilides of the formula (I) according to Claim 1, characterized in that
 - a) carboxylic acid derivatives of the formula (II)

 $A = \begin{bmatrix} 0 & & & \\ & & & \\ & & & \end{bmatrix}$

in which

X¹ represents halogen or hydroxyl and

A is as defined in Claim 1,

are reacted with amines of the formula (III)

in which

R, R¹, R², R³ and R⁴ are as defined in Claim 1,

if appropriate in the presence of a catalyst, if appropriate in the presence of a condensing agent, if appropriate in the presence of an acid binder and if appropriate in the presence of a diluent,

20 or

25

10

b) halogeno-carboxamides of the formula (IV)

$$\begin{array}{c|c}
O & & \\
R^4 & X^2
\end{array}$$
(IV)

in which

R, R4 and A are as defined in Claim 1, and

X² represents bromine or iodine,

are reacted with boronic acid derivatives of the formula (V)

in which

R¹, R² and R³ are as defined in Claim 1, and

A¹ and A² each represent hydrogen or together represent tetramethylethylene, in the presence of a catalyst, if appropriate in the presence of an acid binder and if appropriate in the presence of a diluent,

or

c) carboxamide boronic acid derivatives of the formula (VI)

10

5

in which

R, R4 and A are as defined in Claim 1, and

A³ and A⁴ each represent hydrogen or together represent tetramethylethylene,

are reacted with pyridinyl derivatives of the formula (VII)

$$\mathbb{R}^3$$
 \mathbb{R}^1
 \mathbb{R}^2
 \mathbb{R}^2
 \mathbb{R}^2

15

in which

R¹, R² and R³ are as defined in Claim 1,

in the presence of a catalyst, if appropriate in the presence of an acid binder and if appropriate in the presence of a diluent,

20

or

d) halogeno-carboxamides of the formula (IV)

in which

R, R4 and A are as defined in Claim 1, and

X² represents bromine or iodine,

are reacted with pyridinyl derivatives of the formula (VII)

$$\mathbb{R}^3$$
 \mathbb{R}^2
 \mathbb{R}^1
 \mathbb{R}^2
(VII)

in which

R¹, R² and R³ are as defined in Claim 1,

in the presence of a palladium or platinum catalyst and in the presence of 4,4,4',4',5,5,5',5'-octamethyl-2,2'-bis-1,3,2-dioxaborolane [bis(pinacolato)diboron], if appropriate in the presence of an acid binder and if appropriate in the presence of a diluent,

or

e) pyridinylanilides of the formula (I-1)

15

5

10

in which

R, R¹, R², R³ and A are as defined in Claim 1,

are reacted with halogenides of the formula (VIII)

$$R^{4a} - X^3$$
 (VIII)

20

in which

X³ represents chlorine, bromine or iodine,

represents C₁-C₃-alkyl, C₁-C₆-alkylsulfinyl, C₁-C₆-alkylsulfonyl, C₁-C₄-alk-oxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-halogenoalkyl, C₁-C₄-halogenoalkylsulfonyl, halogeno-cycloalkylsulfonyl, c₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halogenocycloalkyl having in each case 1 to 9 fluorine-, chlorine- and/or bromine atoms; formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl; (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-halogenoalkoxy)carbonyl-C₁-C₃-alkyl having in each case 1 to 7 fluorine-, chlorine- and/or bromine atoms,

(C₁-C₃-alkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-halogenoalkyl having in each case 1 to 6 fluorine-, chlorine- and/or bromine atoms, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-halogenoalkyl, (C₁-C₃-halogenoalkyl)carbonyl-C₁-C₃-halogenoalkyl having in each case 1 to 13 fluorine-, chlorine- and/or bromine atoms; -COR⁵, -CONR⁶R⁷ or -CH₂NR⁸R⁹,

5

15

R⁵, R⁶, R⁷, R⁸ and R⁹ are as defined in Claim 1, in the presence of a base and in the presence of a diluent.

- 12. Compositions for controlling unwanted microorganisms, characterized in that they comprise at least one pyridinylanilide of the formula (I) according to Claim 1, in addition to extenders and/or surfactants.
 - 13. Use of pyridinylanilides of the formula (I) according to Claim 1 for controlling unwanted microorganisms.
 - 14. Method for controlling unwanted microorganisms, characterized in that pyridinylanilides of the formula (I) according to Claim 1 are applied to the microorganisms and/or their habitats.
- Process for preparing compositions for controlling unwanted microorganisms, characterized in that pyridinylanilides of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.
 - 16. Amines of the formula (III)

$$\begin{array}{c|c}
R \\
HN \\
R^4 \\
R^3 \\
R^2
\end{array}$$
(III)

25

in which

R, R¹, R², R³ and R⁴ are as defined in Claim 1, excluded compounds of the formula (III), in which

R represents hydrogen and ^

R¹, R² and R³ independently of one another each represents hydrogen, halogen, straight-chain or branched alkyl having 1 to 4 carbon atoms or straight-chain or branched halogenoalkyl having 1 to 4 carbon atoms; and R⁴ represents hydrogen.

17. Amines of the formula

in which

R and R4 are as defined in Claims 1, 2 or 3 and

R^{1a} represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylaminocarbonyl, alkylaminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and

Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl

10

15

20

25

(

having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy.

5 18. Amines of the formula

in which

R and R4 are as defined in Claims 1, 2 or 3 and

R^{1a} represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety; or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and

10

15

20

25

Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

10

5

19. Amines of the formula

in which

R and R4 are as defined in Claims 1, 2 or 3 and

15

R^{1a} and R^{2a} independently of one another each represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms

20

25

5

10

15

20

25

30

in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and

Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy.

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

20. Amines of the formula

in which

R and R⁴ are as defined in Claims 1, 2 or 3 and

R^{1a} and R^{2a} independently of one another each represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl;

or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety; or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

5

10

15

20

30

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkyl-carbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and

Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

21. Amines of the formula

25 in which

R and R4 are as defined in Claims 1, 2 or 3 and

R^{1a}, R^{2a} and R^{3a} independently of one another each represents halogen, cyano, nitro, amino, hydroxyl, formyl, carboxyl, carbamoyl, thiocarbamoyl; or represents in each case straight-chain or branched alkyl, hydroxyalkyl, oxoalkyl, alkoxy, alkoxyalkyl, alkylthioalkyl, dialkoxyalkyl, alkylthio, alkylsulfinyl or alkylsulfonyl having in each case 1 to 8 carbon atoms in the respective alkyl moiety;

or represents in each case straight-chain or branched alkenyl or alkenyloxy having in each case 2 to 6 carbon atoms;

or represents in each case straight-chain or branched halogenoalkyl, halogenoalkoxy, halogenoalkylthio, halogenoalkylsulfinyl or halogenoalkylsulfonyl having in each case 1 to 6 carbon atoms and 1 to 13 identical or different halogen atoms;

or represents in each case straight-chain or branched halogenoalkenyl or halogenoalkenyloxy having in each case 2 to 6 carbon atoms and 1 to 11 identical or different halogen atoms;

or represents in each case straight-chain or branched alkylamino, dialkylamino, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, arylalkylaminocarbonyl, dialkylaminocarbonyloxy having 1 to 6 carbon atoms in the respective hydrocarbon chain, alkenylcarbonyl or alkynylcarbonyl having 2 to 6 carbon atoms in the respective hydrocarbon chain;

or represents cycloalkyl or cycloalkyloxy having in each case 3 to 6 carbon atoms; or represents the grouping $-C(Q^1)=N-Q^2$, wherein

- Q¹ represents hydrogen, hydroxyl or C₁-C₄-alkyl, C₁-C₄-halogenoalkyl having 1 to 9 identical or different halogen atoms, or C₃-C₆-cycloalkyl and
- Q² represents hydroxyl, amino, methylamino, phenyl, benzyl; or represents C₁-C₄-alkyl or C₁-C₄-alkoxy, each of which is optionally substituted by halogen, cyano, hydroxyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylamino, di(C₁-C₄-alkyl)amino or phenyl; or represents C₂-C₄-alkenyloxy or C₂-C₄-alkynyloxy,

represents phenyl, phenoxy, phenylthio, benzoyl, benzoylethenyl, cinnamoyl, heterocyclyl or phenylalkyl, phenylalkyloxy, phenylalkylthio or heterocyclylalkyl having in each case 1 to 3 carbon atoms in the respective alkyl moieties, each of which is optionally mono- to tri-substituted, identically or differently, in the ring moiety by halogen, in each case straight-chain or branched C₁-C₄-alkyl and C₁-C₄-alkoxy.

10

5

15

20

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:		
☐ BLACK BORDERS		
\square IMAGE CUT OFF AT TOP, BOTTOM OR SIDES		
☐ FADED TEXT OR DRAWING		
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING		
☐ SKEWED/SLANTED IMAGES	•	
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS		
☐ GRAY SCALE DOCUMENTS		
☐ LINES OR MARKS ON ORIGINAL DOCUMENT		
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY		

IMAGES ARE BEST AVAILABLE COPY.

☐ OTHER:

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.